



WHITE PAPER

BY
CHRISTOPHER J. MANTEL, DDS



INTRODUCING TRU™ BY MICROBRUSH®

The purpose of this white paper is to convey the benefits of TRU by Microbrush. During the redesign of a dental instrument as simple as an applicator, much thought was given on how to improve its efficacy.

Applicators have changed very little compared with the advance of other dental products.

TRU by Microbrush is designed to be a micro-applicator that will improve consistency, minimize waste, maximize ergonomics and increase clinical efficacy.

DEVELOPING A SUPERIOR MICRO-APPLICATOR

Microbrush sought feedback on a new product they were excited about because of the technology involved. To me, it's always interesting to test new products because of my dental perspective.



“...ONE THING WAS EXPLICITLY CLEAR FROM THE FIRST TRIALS: TRU BY MICROBRUSH HAD THE POTENTIAL TO BE A SUPERIOR DENTAL APPLICATOR.”

As dentists, we get to use the same instruments thousands of times a year and seemingly minor changes make a big difference in performance. I knew what I wanted in an applicator product and I was excited to offer my thoughts. I got involved with early prototypes of TRU by Microbrush.

The early prototypes needed a lot of refinement, but one thing was explicitly clear from the first trials: TRU by Microbrush had the potential to be a superior dental applicator.

ADVANCED FLOCKING TECHNOLOGY

The new applicator's biggest improvement comes where the flock fibers adhere to the terminal shank of the handle.



TRU by Microbrush uses novel technology to eliminate the need for the intermediate glue layer. This is important for two reasons: tip size and holding volume consistency.

The tip size can be chosen based on the dentist's corresponding bur sizes so TRU by Microbrush is the same size as your prep bur. The tip is non-linting, non-absorbing and non-dissolving in dental solutions.

A SMALL SOLUTION TO BIG PROBLEMS

When practicing conservative dentistry with small cavity preps and no anesthesia fissurotomy preps, I often find that existing applicator tips tend to bind during use. Quite simply, they are too large. This can cause three problems: tip breakage or disintegration, insufficient penetration of dental solutions to the tooth, and

either too much or too little solution to the tooth.

The ultrafine size of TRU by Microbrush solves each of these problems.

The ultrafine size is 0.5 millimeters in diameter and 3 millimeters in length before it begins to increase in size. The prototype applicators underwent many revisions to perfect the size. Mainly, the parameters of size were used with small pit and fissure caries and preventive resin restorations in mind.

ACCURACY THAT CUTS OUT THE WASTE

The TRU by Microbrush ultrafine size can navigate the entire cavosurface of teeth prepared with one pass, gracefully applying solutions with no binding, breaking or disintegration of the tip. It will also carry a consistent amount of bonding agent to the depth of tooth preparations.

Gone are the days where you are forced to use a large applicator, saturated with solution, to flood the preparation and disperse it everywhere with your air syringe.

The TRU by Microbrush ultrafine size allows you to place an appropriate amount of solution in the appropriate place, so you can move on with your procedures. This significantly cuts down on mess and wasted dental solutions.



“BY CHOOSING THE RIGHT TRU BY MICROBRUSH SIZE, THE CLINICIAN MINIMIZES WASTE OF COSTLY DENTAL SOLUTIONS.”

The ultrafine size is the smallest TRU by Microbrush applicator at 0.5 millimeters, followed by the superfine size at 1 millimeter, the fine size at 1.5 millimeters and the regular size at 2 millimeters.

Again, with each increase in the size of the applicator, there is a corresponding increase in tip surface area that allows each applicator to carry a larger amount of solution to the tooth. A larger-sized prep cavity would use a larger-sized TRU by Microbrush, which would deliver a correspondingly larger amount of solution to the tooth.

It is advisable that the clinician would choose the appropriately sized TRU by Microbrush applicator based on preparation size and solution volume needed. Choosing an appropriate size reduces the amount of dipping back into dental solutions.

I find myself using the ultrafine size for fissurotomy and small Class 1 preps; the superfine size for most Class 2 preparations; the fine size for multi-surface resins, Class 5 resins and core buildups; and the regular size for applying desensitizer and bond-to-bonded crown preparations.

By choosing the right TRU by Microbrush size, the clinician minimizes waste of costly dental solutions.





TWO BENDS ARE BETTER THAN ONE

Dental applicators are bent at the tip to allow better access to the preparation. To allow the clinician greater access, TRU by Microbrush now has two bending points in the tip.

The first bending point is five millimeters from the end, while the second and main bending point remains at 12 millimeters. The 5-millimeter bending point allows for better visibility when working with preparations less than five millimeters deep.

The first bending point allows for better access in the mouths of pediatric patients and patients that have limited opening. Both bending points on TRU by Microbrush are thoughtfully engineered in the tip. The two bending points have different resistance to bending so clinicians can be sure they will not have bending at a place they do not expect it.

The material used for the tip of TRU by Microbrush is extremely resilient to breaking, therefore dramatically reducing – almost eliminating – tip breakage.

'A GIANT STEP FORWARD'

I'm a firm believer that instruments go in patient's mouths, not fingers. With that in mind, the total length of TRU by Microbrush applicators is 12 centimeters.



"EASE OF ACCESS ALLOWS ME TO MAINTAIN BETTER ERGONOMICS THROUGHOUT EACH PROCEDURE I PERFORM, MINIMIZING BODY STRAIN."

There is an optional 2-centimeter breakoff on the end of the handle should you desire a shorter applicator. The length of the applicator is 12 centimeters to facilitate easy access to the most posterior teeth in the mouth. Ease of access allows me to maintain better ergonomics throughout each procedure I perform, minimizing body strain.

TRU by Microbrush is a giant step forward for applicator technology, addressing the shortcomings of previous dental micro-applicators and allowing clinicians to practice more efficiently and effectively while minimizing waste.